

exact time was a little uncertain, the conditions being far from favourable. Possibly the spot may have effected its passage a little before this time, as from several views of the following end of this object at about 4h. 30m., I concluded my estimate might be a trifle late, but in any case the error would be small.

Comparing the observation on November 26 with that recorded on May 21, it will be found that in the interval of 188'64 days the red spot completed 456 rotations, and that its mean period was 9h. 55m. 40'15s. This is nearly identical with the rotation period I found for the same object in 1888, when it was 9h. 55m. 40'24s. (462 rotations), and in 1887, when the figures were 9h. 55m. 40'5s. It is evident from these several determinations that during the last three oppositions the motion of the spot has been very consistent and equable. There has been a slight acceleration perhaps in velocity, inducing the rotation period to become a little shorter, but the differences are so small that they may well be covered by the observational errors which cannot be altogether eliminated from work of this character, and particularly at a time when the object observed is unfavourably placed. In any case the red spot has rotated with more celerity during the last year or two than in 1886, when its mean period was 9h. 55m. 41'1s., to which it had gradually increased from 9h. 55m. 34'2s. in 1879-80. These variations of motion may be regularly effected in a cycle, and it will be very important if future observations can determine the exact period.

The white spots near the equator of Jupiter are still occasionally visible, but it has not been feasible to secure views of them of a sufficiently exact nature to deduce their rotations. In recent years the apparent velocity of these objects has been decreasing, for while in the autumn of 1880 their period was 9h. 50m. 6s., it was found, from many observations of similar markings by Mr. A. Stanley Williams, of Brighton, in 1887, that it had increased to 9h. 50m. 22'4s.

Since 1884 a number of white spots have been also observed on the northern borders of the great northern equatorial belt. The period of these is but very slightly less than that of the red spot. On September 12, I observed one of these situated in a longitude not far preceding the west end of the red spot, and it appeared to have divided the equatorial belt with a vein of bright material. There was another object of the same kind following the red spot, but in this case the continuity of the belt was not interrupted, the bright matter appearing as a slight indentation in its northern side. These markings are shown in a drawing of Jupiter made by Mr. Keder with the great Lick refractor, power 315, on September 5 last, but they are not delineated in quite the same characters as seen here. The drawing alluded to is perhaps the best and the most replete with detail of any I have ever seen of this planet, and it furnishes clear testimony that the defining properties of the 36-inch telescope are of the highest order.

The curiously curved belt immediately north of the red spot is still one of the most prominent features on the planet's disk. It forms the southern half of the great south equatorial belt which is double. Under the ends of the red spot it suddenly dips to the north and runs into the other half of the belt. In recent years the curved belt has been very dark and pronounced in the region contiguous to the following end of the red spot, and upon its crest there have been condensations of extremely dark matter. Under the preceding end of the spot this belt is, however, more delicate in tone, and it looks like a mere pencil shading.

During the few ensuing years these interesting features may be studied to greater effect, as the planet will assume a more northerly position, and rise above the vaporous undulations which have recently much interfered with observations of his surface.

W. F. DENNING.

NOTES.

DR. ARCHIBALD GEIKIE, F.R.S., has just received a diploma of membership of the Kaiserlich Leopoldinisch-Carolinisch Deutsche Akademie der Naturforscher, the oldest scientific Society of Germany.

SIR JOHN LUBBOCK's name appears in the list of those who have received New Year's honours and appointments. He has been made a member of the Privy Council. A baronetcy has been conferred on William Scovell Savory, F.R.S., President of the Royal College of Surgeons.

THE Paris municipality proposes to do honour to the memory of Darwin by naming a new street after him.

A COMMITTEE has been formed in Paris for the purpose of preparing the way for the erection of a statue of the late M. Boussingault. His scientific researches were of so much service to industry, especially to agriculture, that the Committee ought to have little difficulty in obtaining the necessary funds.

THE death of Sir Henry Yule, which we regret to have to record, is a great loss to geographical science. He died on Monday, in his seventieth year. His masterpiece was his splendid edition of the "Book of Ser Marco Polo"—a work to the permanent value of which he added largely by his learned and luminous notes.

WE regret to announce the death, after an illness which lasted some months, of M. Eugène Deslongchamps, of the Château Mathieu, Calvados. He was formerly Professor of Zoology and Palæontology at the Faculty of Sciences at Caen, and a member of the committee of the "Palæontologie Française." He was the son of the celebrated French palæontologist, Prof. Eudes-Deslongchamps, and published several memoirs on the palæontological fauna of Normandy, ranging from Brachiopoda to the Crocodilia. His best known memoirs are the "Prodrome des Téléosauriens du Calvados" and "Les Brachiopodes des Terrains Jurassiques."

GERMAN papers announce the death of Dr. Karl Edward Venus, an eminent entomologist, and founder of the Entomological Society "Iris," at Dresden. He died on December 13.

THE Congress of Russian men of science and physicians is now holding its eighth meeting. Work began on December 28, and will go on until January 7.

THE general meeting of the Association for the Improvement of Geometrical Teaching will be held in the Botanical Theatre, University College, London, on Friday, January 17. At the morning sitting (11 a.m.) the reports of the Council and the Committees will be read, the new officers will be elected, and various candidates will be proposed for election as members of the Association. After an adjournment for luncheon at 1 p.m., members will reassemble for the afternoon sitting (2 p.m.), at which papers will be read by the Rev. Dr. C. Taylor, on "A New Treatment of the Hyperbola"; by Mr. G. Heppel, on "The Teaching of Trigonometry"; by Mr. E. M. Langley, on "Some Geometrical Theorems"; and by the President (Prof. Minchin), on "Statics and Geometry."

THE Annual Conference of the Principals of the University Colleges was held on Tuesday at the Durham College of Science, Newcastle-upon-Tyne, Principal Garnett occupying the chair. The Principals were subsequently entertained at dinner by the chairman. Several questions affecting the interests of the Colleges collectively were discussed at the meeting, and it was decided on the invitation of Principal Reichel that the next gathering should be held at University College, Bangor.

THE Paris Municipal Council has lately instituted two new scientific chairs in the Hotel de Ville. One of them is devoted

to the study of the history of religions. The other is a Chair of Biology, and has been entrusted to Prof. Pouchet, of the Natural History Museum, who delivers a course of general lectures on the fundamental ideas relating to zoology, anatomy, life, &c.

AT a meeting of the Senate of the University of Sydney, on November 4, 1889, a letter from Dr. Haswell was read, intimating his acceptance of the Senate's offer of the Challis Professorship of Biology, to take effect from March 1, 1890.

AT the annual meeting of the Manx Geological Society on December 28, in the Peel Grammar School, Dr. Haviland, the retiring President, referred with pleasure to the fact that early in the summer Mr. Robert Russell had been sent to prosecute the geological survey of the Isle of Man. Dr. Haviland was also able to congratulate Peel on the prospect of a system of technical education being established in Christian's School, under the auspices of the Cloth Workers' Company and Sir Owen Roberts.

MR. A. V. GARRATT, Secretary of the American National Electric Light Association, has sent to the members a circular letter, asking them to state briefly the hardest electrical problems they meet in their investigations or in the conduct of their electrical business. He asks them also to state what feature of their business is the least economical or efficient, and why, and where the greatest economy could be effected if the difficulty could be overcome. The answers to these queries will be digested, and the results submitted to Prof. Henry A. Rowland, of Johns Hopkins University. Prof. Rowland has consented to address the next Electric Light Convention at Kansas City in February, basing his remarks upon the problems suggested by the members, and pointing out the direction in which their solution must be sought.

M. VICTOR GIRAUD, the African explorer, has just published the narrative of his explorations in the African Lake Region from 1883 to 1889. The work contains many illustrations.

THE fourth volume of M. Grandean's "*Etudes Agronomiques*," just issued, contains a review of British and American agriculture, as represented at the Paris Exhibition.

AN historical sketch of the geographical works relating to Russia has been compiled by Baron Kaulbars under the auspices of the Imperial Geographical Society of Russia, in which the author endeavours to show the respective parts played by the army and navy, with various scientific societies, in the exploration and representation of the Empire. Beginning with the map found by Dr. Michof in St. Mark's library, Venice, only five years ago, and dating back to 1525, he traces all the labours, geographic and geodetic, referring to Russia. The astronomer Struve figures well among the latter workers in the measurements of various meridian arcs and the determination of differences of longitude, whilst few can speak with more authority than Colonel Baron Kaulbars himself on the geographical portion. Hydrographical labours began with Peter the Great, and all similar undertakings completed by the Russian navy have been brought together; the bibliographical sketch commencing with the Baltic Sea, as being the most important in the history of the navy. In the chapter chronicling the works of scientific societies, accounts are given of the many explorations into Siberia and Arctic regions. A long and complete list of all maps due to Russian topographers is also given in historical sequence, together with the various scales used.

THE Report of the Kew Committee for the year ending October 31 last contains an interesting account of the experiments carried on at the Kew Observatory; the list of instruments verified, especially clinical thermometers, Navy telescopes

and sextants, and of chronometers and watches rated, is a sufficient test of the value set upon the certificates given. The death of Mr. De la Rue, the Chairman of the Committee, will be much felt, as he was one of the most munificent benefactors of the Observatory, and it was at his suggestion that the first photoheliograph was constructed and brought into use there. The complete sets of magnetic, meteorological, and electrical instruments have been kept in perfect working order, and summaries of the results for the year's working are given in the appendices to the Report. Sketches of sun-spots have been made on 173 days, and the collection of solar negatives taken between 1858 and 1872 have been handed over to the Solar Physics Committee, with a view to their utilization. A good whirling machine has been erected, for the purpose of examining the accuracy of small anemometers and of the air-meters employed in measuring air-currents in mine-shafts, &c. In accordance with a resolution of the International Meteorological Committee, a thermometer of very low range has been constructed, to be used as a standard spirit thermometer for temperatures ranging from zero to about -70° C.

MESSRS. SAMPSON LOW have issued, with Mr. Stanley's permission, a shilling volume, containing "The Story of Emin's Rescue as told in Stanley's Letters." It has been edited by Mr. Keltie, who contributes an introduction bringing the narrative of the Emin Pasha Relief Expedition up to the date at which the first of Mr. Stanley's letters was received. A map, showing Mr. Stanley's routes and discoveries, is included in the volume.

AT the meeting of the Photographic Society on December 10, Mr. G. M. Whipple read an interesting and valuable paper on photography in relation to meteorology. There are now 32 observatories—8 in this country, 7 in the colonies, and 17 abroad—in which photographic apparatus is used for meteorological observations.

AT the meeting of the French Meteorological Society of December 3, 1889, M. Wada gave an account of the cyclone which ravaged the southern and eastern part of Japan on September 11 and 12 last. The centre of the storm followed a course towards N. 35° E., progressing at a rate of 30 to 43 miles an hour, the velocity of the wind reaching 65 miles an hour. The barometer fell to 28.23 inches—a reading which is only known to have occurred once before in Japan. This storm raised an enormous wave, said to have been nearly 20 feet above high-water mark, and which carried away 3000 houses. M. Ritter explained his experiments upon the artificial production of clouds in liquids and gases. With regard to the clouds in the atmosphere, the author distinguishes two principal kinds—viz. (1) the "stratus" and semi-transparent mist, and (2) the ordinary forms, such as "cumulus," &c., and he deals with them from two points of view: the diffusion of vapour according to Dalton's law, and the transference of clouds by the movement of the air. He referred to the different results produced from these conditions, with regard to suspension in the atmosphere, &c. The details of the paper will be published in the *Annuaire* of the Society.

THE *Jaarboek* of the Royal Meteorological Institute of the Netherlands for 1888 is the fortieth of the series, and contains, in addition to the daily observations and summaries at various stations a summary of phenological observations for 1879–88, and observations at Parimaribo, Jeddah, and from the Upper Congo. The preface contains an explanation of the conventional signs used in this long series, and of the curious errors which have occurred from time to time; a reference to this volume is therefore necessary to anyone who wishes to make use of the

observations of previous years, as the errors are not all typographical; for instance, the wind is given during a year and eight months in kilometres per hour instead of $\frac{1}{4}$ kilometres. But, notwithstanding certain defects and peculiarities of methods, the Institute has been consistent in keeping to one and the same plan, from a period at which the publication of systematic observations was in its infancy.

THE trustees of the Missouri Botanical Garden, in accordance with the intention of its founder, have set a good example by establishing six scholarships for garden pupils, the object being to provide theoretical and practical instruction for young men desirous of becoming gardeners. The course of instruction will extend over six years, and will include thorough training in every department of work in which practical gardeners are interested.

FROM the latest Report of the School of Mines and Industries at Bendigo, Victoria, we are glad to learn that this institution continues to make steady progress. In 1883-84 it had 324 students. The number in 1888-89 was 799. This shows, as the Council fairly claim, that the efforts of the school to supply scientific and technical education to miners, engineers, assayers, architects, pharmacists, artisans, art students, and others are thoroughly appreciated in Australia. Some of the students hail from Queensland, South Australia, and other distant parts.

THE fifth part of the second volume of the *Internationales Archiv für Ethnographie* has been issued. It maintains in all respects the high level reached by previous numbers. Among the contributions are an article in German, by F. Grabowsky, on death, burial, and the funeral festival among the Dajaks; and one in English, by Prof. H. H. Giglioli, on a singular obsidian scraper used at present by some of the Galla tribes in southern Shoa.

AT a meeting of the Philosophical Institute of Canterbury, New Zealand, on October 3, Mr. H. O. Forbes, Director of the Canterbury Museum, Christchurch, described an extinct species of swan from osteological remains which he had discovered while excavating a cave recently exposed at Sumner, on the estuary of the Heathcote and Avon Rivers, a few miles distant from Christchurch. The cave had been entirely concealed by the falling in of the basaltic rock overhanging the entrance. This great heap of *débris* had been there since the arrival of the first settlers at Canterbury, and had been quarried from for twenty-five years for the making of roads, without any trace of a cave being exposed till about the beginning of September. When the cave was first entered, there were found on the surface a few Moa bones, and various Maori implements—a well-made paddle, an ornamental baler, numerous greenstone adzes, obsidian flake scrapers, shell-openers, and ornaments carefully polished. In some of the latter, small holes for suspending them round the neck were drilled in the most beautiful manner. It is difficult to conjecture how the Maoris had accomplished this when European workers in greenstone find it a laborious process even with, and impossible without, a diamond drill. Besides these greenstone objects, there was a great quantity of fishing paraphernalia—stone suckers, fish-hooks of all sizes made out of Moa and other bones—all carefully and elaborately fashioned. Some of the larger fish-hooks were carved out of bones which must have belonged to a *Dinornis* of great size. On the floor of the cave was also found a well-carved representation in wood of a dog, which seems to have formed the terminating ornament of a paddle-handle—evidence that the Maoris were well acquainted with this animal. The femur of the Maori rat and a portion of the skin covered with dense reddish fur in perfect preservation were also obtained. A quantity of human hair was scattered about, both on the floor and in the kitchen midden in front of the cave. This midden was composed chiefly of marine shells

of many kinds, and of the remains of fires and feasts. One large lock of long hair—evidently a woman's—was discovered in the midden tied up with great care at both ends with plaited flax, and incased in a plaited flax pocket. Some very fine bone needles also were come upon, but little thicker than steel needles, with an eye exquisitely drilled. There were, besides Moa bones, those of many other species of birds, of dogs, of fish, of seals (both fur and hair), and sea elephants—all of which had been used for food, but no human bones. Of the ornithic remains, some apparently belong to species now extinct in New Zealand, and not yet described. The bones and egg-shells of the Moa show incontestably that the Maori and it were contemporaneous. The geological evidence would seem to indicate that this cave was of considerable antiquity, and was inhabited at intervals for a long period of time. Several fire-places occur interstratified with bands of silt, as if the cave had been inhabited and then flooded many times. Definite conclusions on the geological evidence have not yet been arrived at. The swan bones discovered consist of three complete coracoids, the proximal and distal portions of the humerus sufficient to complete the whole bone. They differ very little from those of the *Chenopsis atrata* of Australia, except in their greater size. The new species has been named *Chenopsis sumnerensis*. It is smaller, however, than a species of swan discovered—as a complete skeleton—many years ago in Otago, some 18 feet below the surface of the ground, when the foundation for a house was being dug in Dunedin. This Sumner cave has been closed since before the introduction of the *Chenopsis atrata* into New Zealand. The extension, therefore, of the Cygnidae to New Zealand is a very interesting fact in ornithology. A similar cave, but far distant from the present one, was excavated and examined by Sir Julius von Haast (Mr. Forbes's predecessor) many years ago. Of the bones found in it, the Moa remains were fully described by their discoverer, but none belonging to the smaller birds have as yet been described. These with the osteological collections disinterred from the Glenmark and Hamilton swamps, and from the Earnsclough Cave, will form the subject of a future paper by Mr. Forbes before the Institute.

IN a previous paper before the Philosophical Institute of Canterbury, Mr. Forbes pointed out that the bone figured by Prof. Owen on plate ciii. of his "Extinct Birds of New Zealand" as the coracoid of the *Cnemidornis*, belongs with little doubt to *Aptornis*. The coracoid of *Cnemidornis*, of which there are numerous specimens in the Christchurch and Otago Museums, is of the typical anserine form, and closely resembles that of *Cereopsis*. The coraco-clavicular angle in *Aptornis* approached 130° .

THE following curious instance of inheritance of an acquired mental peculiarity is given by Pastor Handtmann, of Seedorf by Lenzen on the Elbe, in the *Korrespondenzblatt* of the German Anthropological Society. When acting as substitute for a few months in 1868, in the parish of Groben, in Brandenburg, he there met a farmer named Löwendorf, who, when he signed his name officially in connection with the school, always wrote his Christian name "Austug" instead of "August." Some years later, the writer was inspecting this school, and heard a little girl read "Leneb" for "Leben," "Naled" for "Nadel," and so on. On inquiry, he found her name was Löwendorf, and she was a daughter of this farmer. The father (then dead) had in talk with his neighbours occasioned much amusement by the peculiar habit, which appeared to be the result of a fall from the upper story of a barn, some time before the birth of this girl. She wrote, as well as spoke, in the peculiar way referred to.

PROF. LEUMANN is of opinion (*Phil. Studien*) that the influence of blood circulation and breathing, on mind-life, has been too little

considered. He notices the parallelism between pulse acceleration and passion, the rush of ideas in fever, and so on. The differences of pulse and breathing in different persons are no less significant, and should be regarded in all psychometric determinations. The author noticed in boys of a Strasburg gymnasium, that in scanning verse, the number of feet spoken in a minute rose with the pulse-frequency. Even in one person, experimented on from midday till evening, the dependence of normal reading of metrical compositions on pulse-frequency was proved; the rhythmic intervals in scanning corresponded to the pulse-intervals. Leumann supposes that to be the most general and normal song-metre, whose feet correspond to the pulsations, and its lines to respiration. And, in fact, the Indo-Germanic original metre consists of four times four trochees, an arrangement agreeing with that view; from it arose the Nibelungen strophe and the hexameter.

IN the Legislative Council of India recently, Mr. R. J. Crosthwaite in introducing the amended Land Revenue (Central Provinces) Bill, said that many objections had been raised, chiefly by the Malguzars' Association of Nagpore, to the powers given by the Bill to the Chief Commissioner to make rules for the management of forests. To show that such powers were necessary, Mr. Crosthwaite instanced two cases of the wanton destruction of forests which is so common in India. In 1885 the Deputy Commissioner of Nagpore reported that the malguzar of Munsar had given a contract for the cutting and removal of the wood in the forest land of his mahal. The villagers had rights in this forest-land, and those rights were interfered with by the cutting of the wood; but, in spite of the Chief Commissioner, the malguzar continued the cutting, and the hills were completely stripped of all timber and brushwood. In another case a zemindar had sold the right to collect resin from his forest. The resin is obtained by girdling the trees, and it was found that in about four square miles of particularly fine forest every sab tree was killed outright. That is, four square miles of forest were destroyed to produce about 1200 rupees. Sir Charles Elliott, speaking on the same occasion, said that if some such provision as that now proposed had existed in the past, the forest clearances round Simla and along the southern slopes of the Himalayas abutting the Punjab plain could never have taken place.

MESSRS. DULAU AND CO. have issued a catalogue of works on chemistry and physics.

IN some copies of NATURE, last week, the following sentence appeared in the first paragraph of the Duke of Argyll's letter on "Acquired Characters and Congenital Variation": "But it implies the denial of 'congenital' causes." It ought to have been: "But it implies no denial of 'congenital' causes."

THE additions to the Zoological Society's Gardens during the past two weeks include a Malbrouck Monkey (*Cercopithecus cynosurus* ♂) from South Africa, presented by Mr. William F. Hughes; a Lesser White-nosed Monkey (*Cercopithecus petaurista*) from West Africa, presented by Mr. Lawson N. Peregrine; two Viscachas (*Lagostomus trichodactylus* ♂ & ♀) from the Argentine Republic, presented by Mr. Thomas Taylor; two Crimson-winged Parrakeets (*Aprosmictus erythropterus* ♂ & ♀) from Australia, presented by Mrs. G. Byng-Payne; a Bonnet Monkey (*Macacus sinicus* ♀) from India, presented by Mr. James Entwistle; a Malabar Parrakeet (*Palaornis columboides*) from Southern India, presented by Mr. J. E. Godfrey; three Common Bluebirds (*Sialia wilsoni*) from North America, presented by Commander W. M. Latham, R.N., F.Z.S.; a Black Wallaby (*Halmaturus walabatus* ♂) from New South Wales, two Black and White Geese (*Anseranas melanoleuca*) from Australia, a Ring-tailed Coati (*Nasua rufa*) from South America, deposited.

OUR ASTRONOMICAL COLUMN.

OBJECTS FOR THE SPECTROSCOPE.

Sidereal Time at Greenwich at 10 p.m., January 2 = 4h. 49m. 56s.

Name.	Mag.	Colour.	R.A. 1890.	Decl. 1890.
			h. m. s.	° ' "
(1) G. C. 1157	—	—	5 27 52	+21 57
(2) 5 Orionis	5	Yellowish-red.	4 47 39	+2 20
(3) 1 Aurigæ	3	Orange.	4 49 48	+33 0
(4) η Aurigæ	4	White.	4 58 48	+41 5
(5) 51 Schj.	6	Very red.	4 59 43	+1 2
(6) 8 Geminorum	Var.	Yellowish-red.	7 36 26	+23 43
(7) 5 Persei	Var.	Yellowish-red.	2 14 59	+58 5

Remarks.

(1) Described as "very bright, very large, very gradually brighter in the middle; barely resolvable." The spectrum was observed at Harvard College in 1869. The continuous spectrum extended from about λ 450 to 607. Two bright lines appear to have been observed, less refrangible than those of other nebulae, but no reliable measures were made, owing to errors in the micrometer (Harvard College Observations, vol. xiii. part i. p. 64). Further observations are required, as all departures from the ordinary spectrum of bright lines are especially interesting in connection with the question of the variation of spectrum with temperature. Comparisons with the carbon flutings seen in the flame of a spirit-lamp, and the brightest flutings of manganese and lead, conveniently obtained by burning the chlorides in the flame, are suggested.

(2) In this star of Group II. the bands are very weak, only 2, 3, 7, 8 being well seen. The star falls in species 3 of the subdivision of the group, the manganese fluting (band 4) being absent because it is masked by the fluting of carbon near λ 564, and 5 and 6 being absent because the temperature is low. The carbon flutings appear to be brightest in the earlier species, and it seems probable that band 9 is also present but has been overlooked. This band is the dark space lying between the bright fluting of carbon 468-474 and the end of the continuous spectrum. Comparisons with the spectrum of the spirit-lamp flame, with special reference to the presence of the carbon fluting 468-474 are suggested. Dunér's mean value for the end of the band in other stars is λ 476.

(3) This is classed by Gothard with stars of the solar type. The usual observations are suggested.

(4) Gothard describes the spectrum of this star as Group IV., but is somewhat doubtful about it. It is probably either a late star of Group III. or Group V., as in either case the hydrogen lines would be moderately thick.

(5) This is a good example of stars of Group VI., in which Dunér records the bands 2, 3, 4, 5, 6, 9, and 10. The last three are carbon absorption flutings, and the only point to be noted in connection with these is the intensity of band 6 (near λ 564), relatively to the other bands. The first four are secondary bands, possibly produced by vapours similar to those which produce the telluric bands in the solar spectrum. Other absorptions may also be looked for.

(6) This is another variable of which no spectrum has been recorded. The range of variation is from about 8.5 at maximum to < 13 at minimum, and the period is 294 days. The maximum occurs on January 2.

(7) This is a variable star of Group II., of the same type as those in which Espin has found bright lines of hydrogen at maximum. The number and character of the bands and the presence or absence of bright lines should be noted. The intensity of the bright carbon flutings and their fading away, if any, as the maximum (January 7) is passed should also be noted. The magnitude at maximum is stated by Gore as 7.6 and that at minimum as < 9.7.

A. FOWLER.

DR. PETERS'S STAR CATALOGUE.—The case of Dr. Peters against Mr. Borst, with reference to the possession of the Clinton catalogue, containing over 30,000 stars arranged in the order of their right ascension, has been definitely settled. It will be remembered that Mr. Borst claimed the catalogue on the grounds that most of the computations had been made by him outside of his labours at the Observatory, and not under the direction of Dr. Peters, who, however, devised the work, and regarded it all